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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,905	03/31/2004	Wen-Jian Lin	QCO.094A/061113	9293
59747 7590 05/10/2007 KNOBBE, MARTENS, OLSON & BEAR, LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER TRAN, HOANG Q	
			ART UNIT 2874	PAPER NUMBER
			MAIL DATE 05/10/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/815,905

Applicant(s)

LIN ET AL.

Examiner

Hoang Tran

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 20-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

Applicant's election of Species C in the reply filed on February 15, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 20-21, 23 and 26-28 rejected under 35 U.S.C. 102(e) as being anticipated by Pei et al. (US 2004/0263028 A1).

In terms of claim 20, Pei discloses an interferometric modulation pixel comprising a first electrode (Fig. 21, '268'), a movable second electrode (263) being situated above the first electrode and being parallel to the first electrode; two supports between the first electrode and the second electrode to form a cavity between the first and second

electrodes (264, 269); and a hydrophobic layer on a cavity-side surface of the first electrode (Para [172]).

As to claim 21, the hydrophobic layer comprises a hydrophobic organic compound having at least a hydrogen atom being capable of forming hydrogen bonds with oxygen or nitrogen atoms (Para [0195]).

As to claim 23, the first electrode comprises an insulating layer (Para [0064]).

As to claim 26-28, the first electrode comprises a transparent conductive layer, a light-absorption layer, and an insulating layer (Para [0187]), and wherein the movable second electrode is a light-reflection electrode (Para [0187]) having a hydrophobic layer prevents the first electrode from adsorbing water molecules (Para [0195]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pei et al. (US 2004/0263028 A1) in view of Peterson et al. (US 6,335,224 B1).

Regarding claim 22, 24-25, Pei discloses the invention of claim 20, however, Pei does not explicitly disclose the molecular compound of the hydrophobic organic compound comprises silanes including hexamethyl disilane. Peterson discloses in the Abstract that the microelectronic device is protected by a water adsorption resistant

coating that can be chosen from a list of compounds including hexamethyl disilane for the compound exhibit the desired property of resistant to water adsorption.

Furthermore, Peterson discloses the insulating layer comprises silicon nitride and the hydrophobic layer is positioned on the insulating layer (Fig. 2B '26'). It would have been obvious to one having ordinary skill in the art to recognize the teaching of Peterson would be applicable to the art of Pei in modifying Pei's prior art. The motivation for using the compounds as claimed is obvious to one having ordinary skill in the art for it's property of resisting water adsorption and is clearly taught in Peterson's prior art that such material is used to collectively package and protect the microelectronic devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Tran whose telephone number is 571-272-5049. The examiner can normally be reached on 9:00AM - 5:00 PM.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2874

Ht



Hoang Tran

AU 2874

May 8, 2007



SUNG PAK
PRIMARY EXAMINER